

ARCYRIA VIRESCENS, sp. n.

BY G. LISTER, F.L.S.

AMONG the specimens of Malayan Mycetozoa obtained by Mr. I. H. Burkill, F.L.S., Director of the Botanic Gardens, Singapore, is a handsome species of *Arcyria* with yellowish-green spores. It had developed on a block of wood in orchid pits in the Gardens in February 1916, and was courteously sent to me for identification. The striking features are the green spores, the long slender stalks, and the loose columns of buff or khaki-coloured capillitium, the threads of which are marked with scattered groups of prominent transverse ridges. I wrote to Mr. Burkill suggesting that he had met with a new species, and expressing the hope that more of it might be found.

The integrity of the species has been well established by the observations of Mr. A. R. Sanderson, F.L.S., who collected it at Naboda, Ceylon, in August 1918, and during his residence in the southern part of the Malay Peninsula from 1919 to 1921 he found it was not uncommon in the neighbourhood of Johore.

There is also a gathering of the same species in the Kew Herbarium from North Queensland (No. 155) collected by Pentzke near the Daintree River over forty years ago. (I am indebted to Miss E. M. Wakefield for deciphering "Daintree River," and for explaining the collector's name, which is written "Pentzoke" on the mounting sheet by mistake.) It is in poor condition and consists of a tangle of apparently weathered olive-brown capillitium, without stalks and with few spores; the rather stout threads show the characteristic groups of prominent transverse ridges which, apart from the other features, distinguish the new species from *Arcyria nutans* Grev. and *A. Oerstedtii* Rost. The specimen is marked "*Hemiarcyria fuliginosa*," but is clearly different from the type specimen of *H. fuliginosa* Cooke and Massee from New South Wales, laid out on the same sheet, which is a faded form of *Arcyria Oerstedtii*.

The following is a detailed description of the new green-spored species, for which I propose the name *Arcyria virescens*.

Arcyrea virescens, sp. n. Plasmodium? Sporangia stalked, cylindrical. Stalks slender, straight or flexuose, dark olive-green, 0.5 to 1.5 mm. long, arising from a membranous hypothallus, loosely grouped or united in clusters of three to ten, and widening upwards into narrow funnel-shaped sporangial cups; walls of the cup membranous, reticulated and spinose on the inner side. Capillitium a loose elastic network of dull ochraceous or khaki-coloured threads, unattached to the cup and expanding into a column about 6 mm. long; capillitium threads 4 to 6 μ diam., marked with scattered groups of close-set prominent transverse ridges, 3 to 5 μ deep, arranged more or less in a loose spiral; the remaining surface irregularly reticulated and roughened with delicate often broad-based spines. Spores yellowish-green in mass, 7 to 8 μ diam., smooth except for a few scattered warts.

Habitat on dead wood; Ceylon, Malay Peninsula, Queensland.

A. virescens differs from *A. glauca* Lister, the only other species of *Arcyria* with green spores, in the long dark stalks, narrow cups, and stouter capillitium marked with groups of prominent bars, as well as in the yellower shade of both capillitium and spores.

The elasticity of the capillitium and the ease with which the loose columns separate from the sporangial cups causes rapid dispersion of the spores, and perfect specimens showing the colour of the spores in mass appear to be seldom found. This probably accounts for the species having been overlooked, and regarded as a faded form of *A. nutans*. I have certainly made this mistake myself more than once in the past.

THE FLOWERS OF TRAGOPOGON :

THEIR TIMES OF OPENING AND SHUTTING.

BY MILLER CHRISTY, F.L.S.

EVERYONE is familiar with the fact that the flowers of the Yellow Goats's-beard (*Tragopogon pratense*) open early in the morning and close about mid-day, a habit which has gained for the plant the popular name of "Jack Go-to-bed-at-Noon."

This habit has long been known. Over three centuries ago, Gerard (*Herball*, 595; 1597) wrote that "It shutteth itselfe at twelve of the clocke, and sheweth not his face open untill the next daies sunne do make it flower anew." Linnæus, too, knew of and made definite observations upon the habit. In his *Horologium Floræ*, or 'Floral Clock,' he notes (Phil. Bot. 273-5; 1751) that, at Upsala (lat. 59° 51' N., long. 17° 37' E.), the flowers of *Tragopogon luteum* (= *T. pratense*) open each morning between 3 and 5 A.M. and close for the day between 8 and 10 A.M., their open hours being earlier than those of any other of the forty-six species of flower on which he had made observations. Since his time, Kerner has made similar observations at Innsbruck (lat. 47° 16' N., long. 11° 24' E.) (see his Nat. Hist. of Plants, ii. 215-221; 1902), but unfortunately his list does not include the particular species in question. He notes, however that two nearly-allied species, *T. floccosus* and *T. orientalis*, both open there between 6 and 7 A.M. and close between 10 and 11 A.M.

Yet, apart from this, I have been unable to find that anyone has taken the trouble to observe and to record more precisely the plant's exact hours of opening and closing its flowers. In these circumstances, it may be worth while to place on record a few desultory observations which I have made from time to time on the open-hours of the flowers of both this plant and its near ally the Salsify (*T. porrifolius*).

Some of my notes on the subject are of little or no value, as they record no more than the fact that I observed the flowers either open or closed (as the case might be) at some time during its well-known open-hours or the reverse. Yet two such deserve noting, in view of what follows:—On 6th June, 1881, at Roxwell, Essex, I saw several plants with their flowers fully open at about 12 noon, the weather at the time being very dull and overcast. Again, as showing how completely